



# STIC Search Report

## EIC 1700

STIC Database Tracking Number: 121085

**TO: Camie Thompson**

**Location:** 5C91

**Art Unit : 1774**

**May 12, 2004**

**Case Serial Number: 09/995816**

**From: Barba Koroma**

**Location: EIC 1700**

**REM EO4 A30**

**Phone: 571 272 2546**

**barba.koroma@uspto.gov**

### Search Notes

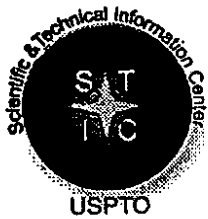
Examiner Thompson,

Please find attached results of the search you requested. Various components of the claimed invention as spelt out in the claims were searched in REGISTRY and CAPLUS databases. You would notice that the search was directed at the polymers listed in claim 25 because they represent the polymers of independent claim 2.

For your convenience, titles of hits have been listed to help you peruse the results set quickly. This is followed by a detailed printout of records. Please let me know if you have any questions.

Thanks.





# STIC Search Results Feedback Form

**EIC17000**

Questions about the scope or the results of the search? Contact *the EIC searcher* or contact:

Kathleen Fuller, EIC 1700 Team Leader  
571/272-2505 REMSEN 4B28

## Voluntary Results Feedback Form

- I am an examiner in Workgroup:  Example: 1713  
➤ Relevant prior art **found**, search results used as follows:

- ☐ 102 rejection
- ☐ 103 rejection
- ☐ Cited as being of interest.
- ☐ Helped examiner better understand the invention.
- ☐ Helped examiner better understand the state of the art in their technology.

*Types of relevant prior art found:*

- ☐ Foreign Patent(s)
- ☐ Non-Patent Literature  
(journal articles, conference proceedings, new product announcements etc.)

➤ Relevant prior art **not found**:

- ☐ Results verified the lack of relevant prior art (helped determine patentability).
- ☐ Results were not useful in determining patentability or understanding the invention.

**Comments:**

**Drop off or send completed forms to EIC1700 REMSEN 4B28**



=> file reg

FILE 'REGISTRY' ENTERED AT 13:26:09 ON 12 MAY 2004  
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Property values tagged with IC are from the ZIC/VINITI data file  
provided by InfoChem.

STRUCTURE FILE UPDATES: 11 MAY 2004 HIGHEST RN 681211-23-4  
DICTIONARY FILE UPDATES: 11 MAY 2004 HIGHEST RN 681211-23-4

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 6, 2004

Please note that search-term pricing does apply when  
conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more  
information enter HELP PROP at an arrow prompt in the file or refer  
to the file summary sheet on the web at:  
<http://www.cas.org/ONLINE/DBSS/registryss.html>

=> file caplus

FILE 'CAPLUS' ENTERED AT 13:26:12 ON 12 MAY 2004  
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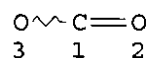
FILE COVERS 1907 - 12 May 2004 VOL 140 ISS 20  
FILE LAST UPDATED: 11 May 2004 (20040511/ED)

This file contains CAS Registry Numbers for easy and accurate  
substance identification.

=> d que 173

L54 STR

<05/11/2004> KOROMA - EIC 1700



NODE ATTRIBUTES:  
DEFAULT MLEVEL IS ATOM  
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:  
RING(S) ARE ISOLATED OR EMBEDDED  
NUMBER OF NODES IS 3

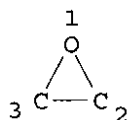
STEREO ATTRIBUTES: NONE  
L58 SCR 2043  
L63 587632 SEA FILE=CAPLUS ABB=ON PLU=ON EL OR ELECTROLUMINESC OR  
LIGHT?(4A) (EMIT? OR EMISS?) OR LUMINESC? OR PHOSPORESC? OR  
FLUORESC?  
L66 STR



NODE ATTRIBUTES:  
DEFAULT MLEVEL IS ATOM  
DEFAULT ECLEVEL IS LIMITED  
ECOUNT IS M2-X3 C AT 1

GRAPH ATTRIBUTES:  
RING(S) ARE ISOLATED OR EMBEDDED  
NUMBER OF NODES IS 2

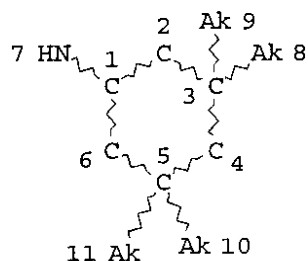
STEREO ATTRIBUTES: NONE  
L67 STR



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DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:  
RSPEC I  
NUMBER OF NODES IS 3

STEREO ATTRIBUTES: NONE  
L68 STR



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 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:  
 RING(S) ARE ISOLATED OR EMBEDDED  
 NUMBER OF NODES IS 11

STEREO ATTRIBUTES: NONE

L71 800 SEA FILE=REGISTRY SSS FUL L68 AND (L67 OR L66) AND L54 AND L58  
 L72 463 SEA FILE=CAPLUS ABB=ON PLU=ON L71  
 L73 6 SEA FILE=CAPLUS ABB=ON PLU=ON L63 AND L72

=> d ti 1-6 l73

L73 ANSWER 1 OF 6 CAPLUS COPYRIGHT 2004 ACS on STN  
 TI Optical fibers having transparent multilayer resin coatings without yellowing

L73 ANSWER 2 OF 6 CAPLUS COPYRIGHT 2004 ACS on STN  
 TI Radiation curable **fluorescent** printing inks

L73 ANSWER 3 OF 6 CAPLUS COPYRIGHT 2004 ACS on STN  
 TI Ink recording paper

L73 ANSWER 4 OF 6 CAPLUS COPYRIGHT 2004 ACS on STN  
 TI Immobilized enzyme optical sensor

L73 ANSWER 5 OF 6 CAPLUS COPYRIGHT 2004 ACS on STN  
 TI Device and methods for joining photoconductors and electrooptical elements

L73 ANSWER 6 OF 6 CAPLUS COPYRIGHT 2004 ACS on STN  
 TI Ultraviolet curing process employing flash photolysis

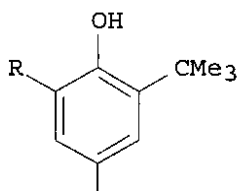
=> d ibib abs hitstr ind total l73

L73 ANSWER 1 OF 6 CAPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 2003:271617 CAPLUS  
 DOCUMENT NUMBER: 138:289083

TITLE: Optical fibers having transparent multilayer resin coatings without yellowing  
 INVENTOR(S): Suzuki, Atsushi; Tanaka, Kazunori; Hattori, Tomoyuki  
 PATENT ASSIGNEE(S): Sumitomo Electric Industries, Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 15 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003104760	A2	20030409	JP 2001-302037	20010928
PRIORITY APPLN. INFO.:			JP 2001-302037	20010928

GI



I

- AB All the coating layers in the optical fibers contain the same compds. chosen from I (R = C1-6 alkyl but tert-Bu). Thus, an optical fiber having a primary coating layer of polyether diol-isophorone diisocyanate (II) copolymer hydroxyethyl acrylate (III) carbamate, isobornyl acrylate (IV), N-vinylcaprolactam, nonylphenol acrylate, nonanediol diacrylate, and 3,9-bis[2-[3-(3-tert-butyl-4-hydroxy-5-methylphenyl)propionyloxy]-1,1-dimethylethyl]-2,4,8,10-tetraoxaspiro[5.5]undecane (V) and a secondary coating layer of polyoxyethylene bisphenol A ether-II copolymer III carbamate, polytetramethylene glycol-II copolymer III carbamate, II-III carbamate (1:2), IV, N-vinylpyrrolidone, polyethylene glycol bisphenol A ether diacrylate, and V showed the maximum change of initial yellowness index [ $\Delta YI(D)$ ] 1 after  $\leq 336$  h exposure to **fluorescent** light.
- IT 504396-06-9P, 2-Hydroxyethyl acrylate-isobornyl acrylate-isophorone diisocyanate-ethoxylated bisphenol A-ethoxylated bisphenol A diacrylate-PTMG-N-vinyl-2-pyrrolidone-isophorone diisocyanate hydroxyethyl acrylate carbamate (1:2) copolymer  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (secondary layers; optical fibers having transparent multilayer resin coatings without yellowing)
- RN 504396-06-9 CAPLUS

CN 2-Propenoic acid, 2-hydroxyethyl ester, polymer with 1-ethenyl-2-pyrrolidinone,  $\alpha$ -hydro- $\omega$ -hydroxypoly(oxy-1,4-butanediyl), 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane,  $\alpha,\alpha'$ -[(1-methylethylidene)di-4,1-phenylene]bis[ $\omega$ -hydroxypoly(oxy-1,2-ethanediyl)],  $\alpha,\alpha'$ -[(1-methylethylidene)di-4,1-phenylene]bis[ $\omega$ -[(1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl)], rel-(1R,2R,4R)-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl 2-propenoate and 2-[[[[[1,3,3-trimethyl-5-[[[2-[(1-oxo-2-propenyl)oxy]ethoxy]carbonyl]amino]cyclohexyl]methyl]amino]carbonyl]oxy]ethyl 2-propenoate (9CI) (CA INDEX NAME)

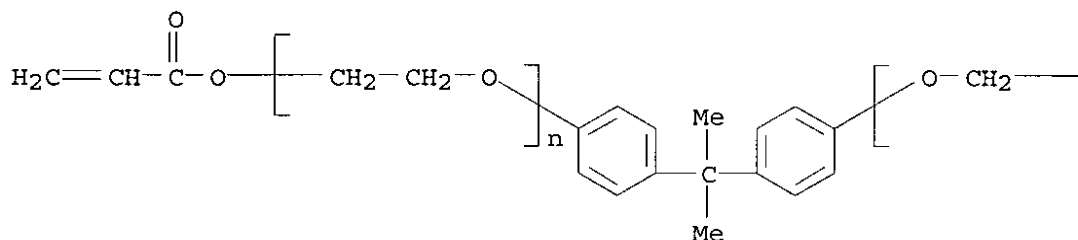
CM 1

CRN 64401-02-1

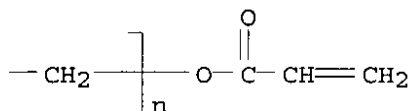
CMF (C2 H4 O)<sub>n</sub> (C2 H4 O)<sub>n</sub> C21 H20 O4

CCI PMS

PAGE 1-A



PAGE 1-B

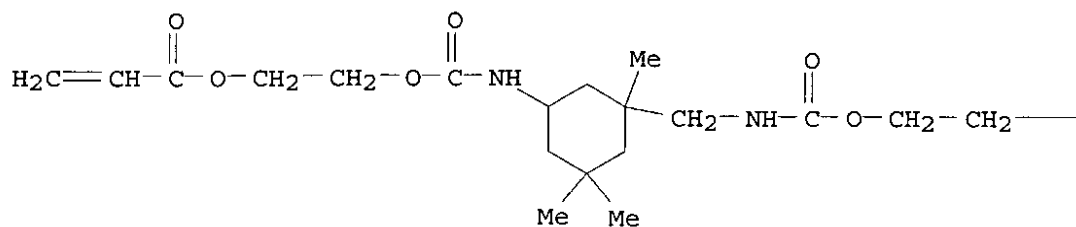


CM 2

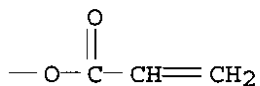
CRN 42404-50-2

CMF C22 H34 N2 O8

PAGE 1-A



PAGE 1-B

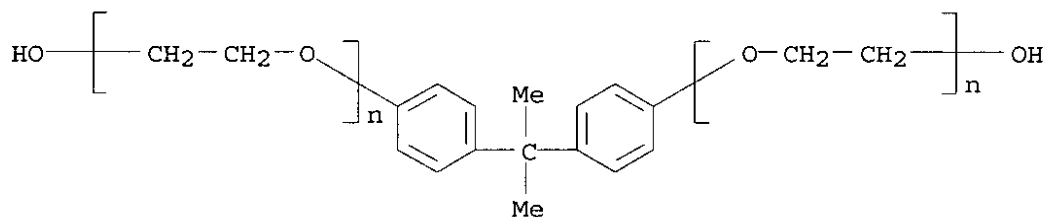


CM 3

CRN 32492-61-8

CMF (C2 H4 O)<sub>n</sub> (C2 H4 O)<sub>n</sub> C15 H16 O2

CCI PMS

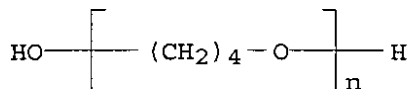


CM 4

CRN 25190-06-1

CMF (C4 H8 O)<sub>n</sub> H2 O

CCI PMS

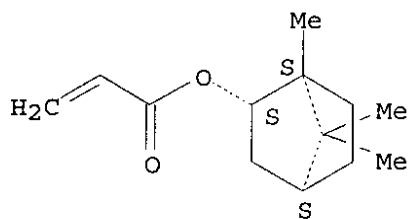


CM 5



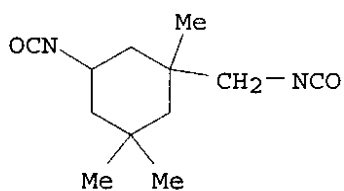
CRN 5888-33-5  
CMF C13 H20 O2

Relative stereochemistry.



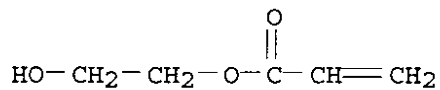
CM 6

CRN 4098-71-9  
CMF C12 H18 N2 O2



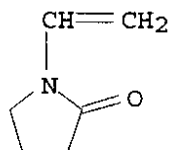
CM 7

CRN 818-61-1  
CMF C5 H8 O3



CM 8

CRN 88-12-0  
CMF C6 H9 N O



IC ICM C03C025-24  
ICS G02B006-44

CC 42-7 (Coatings, Inks, and Related Products)  
Section cross-reference(s): 73

ST optical fiber yellowness free transparent coating; acrylic polyoxyalkylene  
polyurethane optical fiber coating; hindered phenol yellowness prevention  
agent optical fiber

IT Polyurethanes, uses  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material  
use); PREP (Preparation); USES (Uses)  
(acrylic-polyoxyalkylene-; optical fibers having transparent multilayer  
resin coatings without yellowing)

IT Yellowing prevention  
(agents, hindered phenols; optical fibers having transparent multilayer  
resin coatings without yellowing)

IT Transparent materials  
(coatings, optical fibers; optical fibers having transparent multilayer  
resin coatings without yellowing)

IT Optical fibers  
(coatings; optical fibers having transparent multilayer resin coatings  
without yellowing)

IT Polyoxyalkylenes, uses  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material  
use); PREP (Preparation); USES (Uses)  
(diol derivs., polymer with isophorone diisocyanate, hydroxyethyl  
acrylate, N-vinylcaprolactam, and other acrylates, primary layers;  
optical fibers having transparent multilayer resin coatings without  
yellowing)

IT Phenols, uses  
RL: MOA (Modifier or additive use); TEM (Technical or engineered material  
use); USES (Uses)  
(hindered, yellowing prevention agent; optical fibers having  
transparent multilayer resin coatings without yellowing)

IT Coating materials  
(transparent, optical fibers; optical fibers having transparent  
multilayer resin coatings without yellowing)

IT Discoloration prevention agents  
(yellowing, hindered phenols; optical fibers having transparent  
multilayer resin coatings without yellowing)

IT 818-61-1DP, polymers with polyether diols, isophorone diisocyanate,  
N-vinylcaprolactam, and other acrylates 2235-00-9DP, N-Vinylcaprolactam,  
polymers with acryloyl-terminated polyoxyalkylene polyurethanes, isobornyl  
acrylate, nonylphenol acrylate, and nonanediol diacrylate 4098-71-9DP,  
Isophorone diisocyanate, polymers with polyether diols, hydroxyethyl

acrylate, N-vinylcaprolactam, and other acrylates 5888-33-5DP, Isobornyl acrylate, polymers with acryloyl-terminated polyoxyalkylene polyurethanes, N-vinylcaprolactam, nonylphenol acrylate, and nonanediol diacrylate 97145-30-7DP, Nonylphenyl acrylate, polymers with acryloyl-terminated polyoxyalkylene polyurethanes, isobornyl acrylate, N-vinylcaprolactam, and nonanediol diacrylate 107481-28-7DP, 1,9-Nonanediol diacrylate, polymers with acryloyl-terminated polyoxyalkylene polyurethanes, isobornyl acrylate, N-vinylcaprolactam, and nonylphenol acrylate

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(primary layers; optical fibers having transparent multilayer resin coatings without yellowing)

IT 504396-06-9P, 2-Hydroxyethyl acrylate-isobornyl acrylate-isophorone diisocyanate-ethoxylated bisphenol A-ethoxylated bisphenol A diacrylate-PTMG-N-vinyl-2-pyrrolidone-isophorone diisocyanate hydroxyethyl acrylate carbamate (1:2) copolymer 504396-07-0P, 2-Hydroxyethyl acrylate-isobornyl acrylate-polypropylene glycol-TDI-tricyclodecanedimethanol diacrylate-N-vinylcaprolactam-toluenediisocyanate hydroxyethyl acrylate carbamate (1:2) copolymer  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(secondary layers; optical fibers having transparent multilayer resin coatings without yellowing)

IT 90498-88-7  
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)

(yellowing prevention agents; optical fibers having transparent multilayer resin coatings without yellowing)

L73 ANSWER 2 OF 6 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1998:163655 CAPLUS

DOCUMENT NUMBER: 128:218484

TITLE: Radiation curable **fluorescent** printing inks

INVENTOR(S): Likavec, Wayne R.; Bradley, Curtis Ray

PATENT ASSIGNEE(S): Day-Glo Color Corporation, USA

SOURCE: PCT Int. Appl., 26 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9808915	A1	19980305	WO 1997-US15189	19970828
W: BR, CA, JP, MX				
RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
US 5866628	A	19990202	US 1996-705637	19960830
BR 9711284	A	19990817	BR 1997-11284	19970828
EP 958327	A1	19991124	EP 1997-939638	19970828
R: BE, CH, DE, ES, FR, GB, IT, LI, SE				
JP 2000517363	T2	20001226	JP 1998-511929	19970828

*NO DEVICE*

PRIORITY APPLN. INFO.:

US 1996-705637 A 19960830

WO 1997-US15189 W 19970828

AB The ink composition is comprised of (a) 20-90% of an oligomer selected from (i) a formaldehyde oligomer, (ii) a cyclic-aliphatic oligomer, and (iii) mixts. thereof, (b) 0.1-15% **fluorescent** dye, (c) 10-80% photopolymerizable vehicle, and (d) 0-20% photoinitiator. The **fluorescent** inks are curable by exposure to UV or electron beam radiation. An ink contained a mixture of chlorendic anhydride, hydroxyethyl methacrylate, Basic Violet 11, and Basic Red 1, which was heated to 130° and cooled to room temperature, then mixed with trimethylolpropane triacrylate and Darocure 1173.

IT 204327-07-1P

RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (radiation curable **fluorescent** printing inks)

RN 204327-07-1 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, polymer with 5-amino-1,3,3-trimethylcyclohexanemethanamine, 2-ethyl-2-[[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate,  $\alpha$ -hydro- $\omega$ -[(1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl) ether with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol (3:1), and RLE 054 (9CI) (CA INDEX NAME)

CM 1

CRN 204277-73-6

CMF Unspecified

CCI PMS, MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

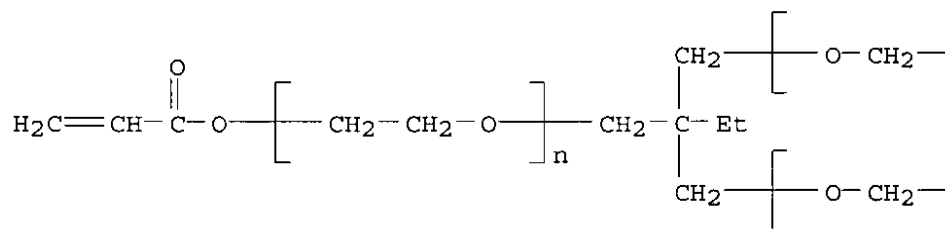
CM 2

CRN 28961-43-5

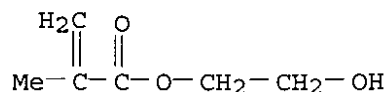
CMF (C2 H4 O)n (C2 H4 O)n (C2 H4 O)n C15 H20 O6

CCI PMS

PAGE 1-A







IC ICM C09K011-00  
ICS C09K011-02; C09D011-00; C09D011-02; C09D011-10; C09D011-16;  
C08J003-28

CC 42-12 (Coatings, Inks, and Related Products)

ST radiation curable **fluorescent** printing ink; cyclic aliph  
oligomer **fluorescent** ink; formaldehyde oligomer  
**fluorescent** ink

IT Polyesters, uses  
Polyesters, uses  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM  
(Technical or engineered material use); PREP (Preparation); USES (Uses)  
(polyamide-; radiation curable **fluorescent** printing inks)

IT Polyamides, uses  
Polyamides, uses  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM  
(Technical or engineered material use); PREP (Preparation); USES (Uses)  
(polyester-; radiation curable **fluorescent** printing inks)

IT Inks  
Inks  
(printing, **fluorescent**; radiation curable **fluorescent**  
printing inks)

IT Epoxy resins, uses  
Polyesters, uses  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM  
(Technical or engineered material use); PREP (Preparation); USES (Uses)  
(radiation curable **fluorescent** printing inks)

IT 25035-71-6P, Formaldehyde-p-toluenesulfonamide copolymer 25067-00-9P,  
Formaldehyde-melamine-toluenesulfonamide copolymer 55586-01-1P,  
Formaldehyde-melamine-p-toluenesulfonamide-urea copolymer 64239-37-8P,  
Benzoguanamine-formaldehyde-p-toluenesulfonamide copolymer 204184-87-2P,  
Chlorendic anhydride-2-hydroxyethyl methacrylate-trimethylolpropane  
triacylate copolymer 204184-88-3P, Chlorendic anhydride-  
dipentaerythritol pentaacrylate-trimethylolpropane triacylate copolymer  
204184-89-4P, 1,4-Cyclohexanedimethanol-2-methyl-1,5-diaminopentane-  
succinic acid copolymer **204327-07-1P** 204327-08-2P  
204327-09-3P 204327-10-6P 204327-11-7P 204327-13-9P 204327-14-0P  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM  
(Technical or engineered material use); PREP (Preparation); USES (Uses)  
(radiation curable **fluorescent** printing inks)

IT 13372-18-4P, Cetyl phthalate  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material  
use); PREP (Preparation); USES (Uses)  
(radiation curable **fluorescent** printing inks)

IT 989-38-8, Basic Red 1 2390-63-8, Basic Violet 11 12221-86-2, Basic  
Yellow 40 12271-01-1, C.I. Solvent Yellow 85 144246-02-6, Solvent  
Yellow 135

RL: MOA (Modifier or additive use); USES (Uses)  
(radiation curable **fluorescent** printing inks)

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L73 ANSWER 3 OF 6 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1990:449929 CAPLUS

DOCUMENT NUMBER: 113:49929

TITLE: Ink recording paper

INVENTOR(S): Kokichi, Shunichiro; Yamori, Tsunefumi; Shiku,  
Shigekazu; Fujioka, Hiroyoshi

PATENT ASSIGNEE(S): Kanzaki Paper Mfg. Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

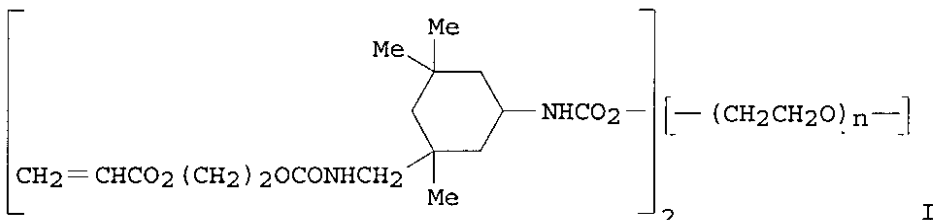
LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 02001360	A2	19900105	JP 1989-25476	19890202
JP 07055581	B4	19950614		
US 4960638	A	19901002	US 1989-306749	19890206
PRIORITY APPLN. INFO.: GI			JP 1988-27011	19880208

*no den ce*



AB The title sheets have recording layer mainly consisting of hydrophilic cured prepolymer having  $\text{O}(\text{CH}_2\text{CH}_2\text{O})_n$  ( $10 \leq n \leq 150$ ) skeleton terminated with radiation-curable groups. Typical prepolymers have structure of urethane (meth)acrylate. Good printability with aqueous inks, fast drying, waterproofness, and resistance to solvents, and good printability by electrophotog. are obtained. Thus, PET film having a layer of prepolymer I was cured with electron beam and used for writing with aqueous **fluorescent** ink and showed the advantages.

IT 65221-92-3, ENT2000

RL: USES (Uses)

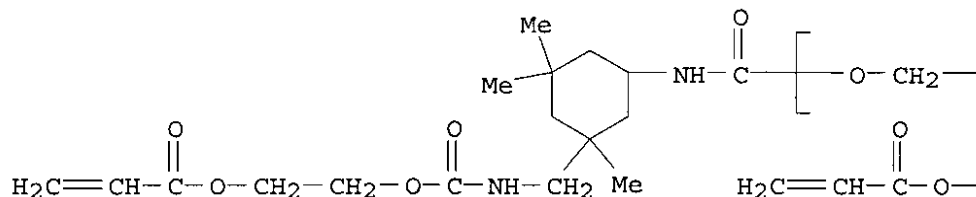
(coating for ink-jet recording paper with printability with aqueous inks)

RN 65221-92-3 CAPLUS

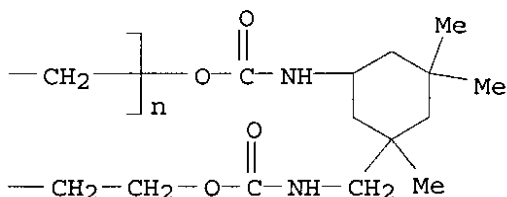
CN Poly(oxy-1,2-ethanediyl),  $\alpha$ -[[[3,3,5-trimethyl-5-[[[2-[(1-oxo-2-propenyl)oxy]ethoxy]carbonyl]amino]methyl]cyclohexyl]amino]carbonyl]-

ω-[[[[[3,3,5-trimethyl-5-[[[[[2-[(1-oxo-2-propenyl)oxy]ethoxy]carbonyl]amino]methyl]cyclohexyl]amino]carbonyl]oxy]-(9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



- IC ICM D21H001-34
- CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
- ST projection slide aq ink writable; electrophotog printable projection slide writable; polyethylene oxide curable projection slide; printing paper coating
- IT Projection slides  
(aqueous ink-writable, electrophotog. printable, coating of)
- IT Urethane polymers, uses and miscellaneous  
RL: USES (Uses)  
(acrylic, coating for ink-jet recording paper with printability with aqueous inks)
- IT Acrylic polymers, uses and miscellaneous  
RL: USES (Uses)  
(polyurethane-, coating for ink-jet recording paper with printability with aqueous inks)
- IT 26570-48-9 65221-92-3, ENT2000 120025-80-1, ENT2000  
RL: USES (Uses)  
(coating for ink-jet recording paper with printability with aqueous inks)

L73 ANSWER 4 OF 6 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1989:523495 CAPLUS

DOCUMENT NUMBER: 111:123495

TITLE: Immobilized enzyme optical sensor

INVENTOR(S): Mochizuki, Akihiko; Iida, Hideyo

PATENT ASSIGNEE(S): Taiyo Yuden Co., Ltd., Japan



SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 01020432	A2	19890124	JP 1987-175866	19870716
PRIORITY APPLN. INFO.:			JP 1987-175866	19870716

AB An optical biosensor, capable of displaying stable readings with high photoelec. conversion efficiency, comprises an amorphous photovoltaic cell (SiC) provided with an enzyme-immobilized membrane formed on the light-receiving surface and capable of **luminescence** in response to H<sub>2</sub>O<sub>2</sub>.

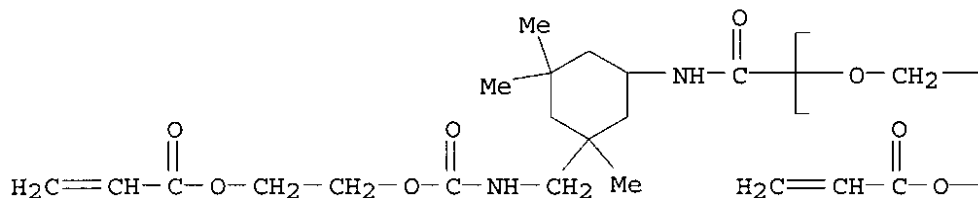
IT **65221-92-3**, ENT2000  
 RL: PRP (Properties)  
 (-immobilized enzyme membrane, optical biosensor from)

RN **65221-92-3** CAPLUS

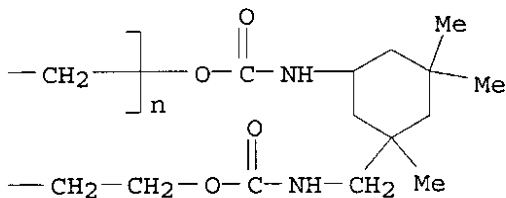
CN Poly(oxy-1,2-ethanediyl),  $\alpha$ -[[[3,3,5-trimethyl-5-[[[2-[(1-oxo-2-propenyl)oxy]ethoxy]carbonyl]amino]methyl]cyclohexyl]amino]carbonyl]- $\omega$ -[[[3,3,5-trimethyl-5-[[[2-[(1-oxo-2-propenyl)oxy]ethoxy]carbonyl]amino]methyl]cyclohexyl]amino]carbonyl]oxy]-(9CI) (CA INDEX NAME)

*not structure  
as per  
initial  
claim!*

PAGE 1-A



PAGE 1-B



IC ICM G01N021-76  
 CC 73-12 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)  
 ST optical biosensor enzyme immobilization membrane

IT Optical detectors  
(biosensor, enzyme-immobilized membrane in combination with)  
IT 65221-92-3, ENT2000  
RL: PRP (Properties)  
(-immobilized enzyme membrane, optical biosensor from)  
IT 521-31-3, Luminol 1760-24-3 9001-37-0, Glucoseoxidase 9003-99-0,  
Peroxidase  
RL: PRP (Properties)  
(enzyme-immobilized membrane from, for optical sensor)

L73 ANSWER 5 OF 6 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1981:140874 CAPLUS  
DOCUMENT NUMBER: 94:140874  
TITLE: Device and methods for joining photoconductors and  
electrooptical elements  
INVENTOR(S): Onstott, James R.; Wolf, Stephen F.  
PATENT ASSIGNEE(S): Minnesota Mining and Manufacturing Co., USA  
SOURCE: Ger. Offen., 25 pp.  
CODEN: GWXXBX  
DOCUMENT TYPE: Patent  
LANGUAGE: German  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 3013826	A1	19801030	DE 1980-3013826	19800410
NL 8002040	A	19801014	NL 1980-2040	19800408
FR 2454110	A1	19801107	FR 1980-8034	19800410

PRIORITY APPLN. INFO.: US 1979-28965 19790411

AB A photoconductor, e.g. a fiber optic, was optically joined to an  
electrooptical element, e.g. a **light-emitting diode**  
(LED), by use of a photocurable adhesive composition which cured in <1 min  
under UV irradiation Thus, .apprx.50 mg of a UV-curable adhesive mixture  
prepared

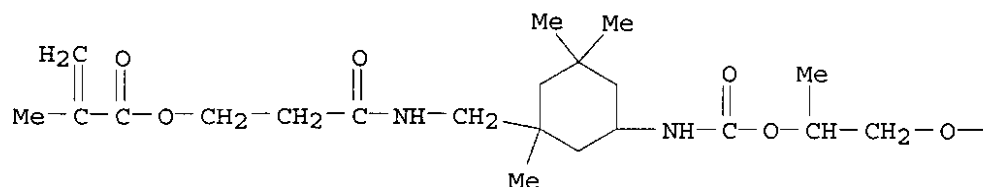
by dilution of a polycaprolactone urethane methacrylate (I) with  
2-N-butylcarbamyethyl methacrylate to a viscosity of 8.7 Pa.s at  
20° was applied to the polished end of a 250- $\mu$ -thick fiber optic  
having an acrylic core with a micromanipulator, the polished end was  
placed in a position perpendicular to the surface of an LED and separated from  
the surface .apprx.15  $\mu$ , and its position was adjusted to give a maximum  
signal intensity. The adhesive joint was irradiated 1 min with UV light  
after which, the fiber optic and LED were optionally aligned. A further  
small amount of I mixture was applied around the joint and irradiated 4 min to  
increase the strength of the attachment. The assembly was subjected to 5  
heating cycles of -20 to 70° (cycle rate: 32 cycles/24 h) after  
which, there was no measurable change from the initial optical  
performance.

IT 77046-18-5 77046-19-6  
RL: TEM (Technical or engineered material use); USES (Uses)  
(adhesives, photocurable, for optical materials)  
RN 77046-18-5 CAPLUS

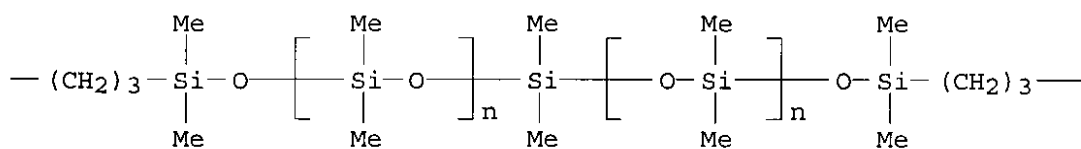
*NO  
EIL  
Campus  
10/2*

CN Poly[oxy(dimethylsilylene)],  $\alpha, \alpha'$ -  
 (dimethylsilylene)bis[ $\omega$ -[[dimethyl[3-[2-[[[3,3,5-trimethyl-5-[[3-  
 [(2-methyl-1-oxo-2-propenyl)oxy]-1-oxopropyl]amino]methyl]cyclohexyl]amino  
 ]carbonyl]oxy]propoxy]propyl]silyl]oxy] - (9CI) (CA INDEX NAME)

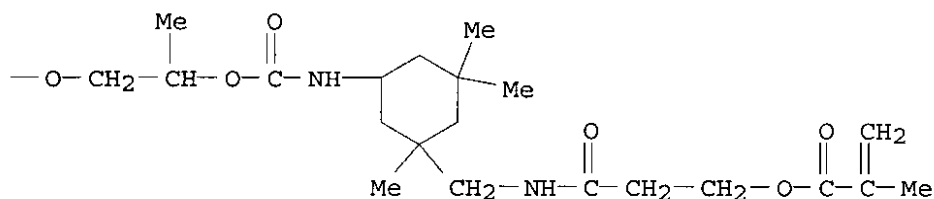
PAGE 1-A



PAGE 1-B



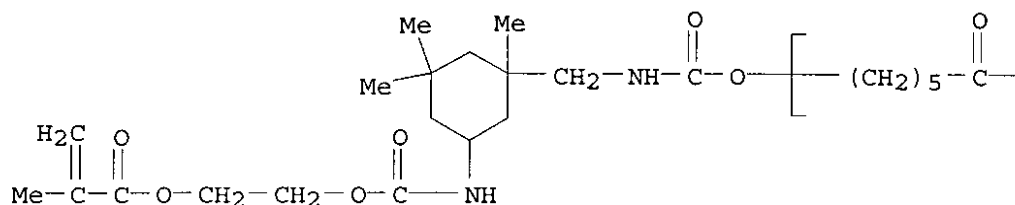
PAGE 1-C



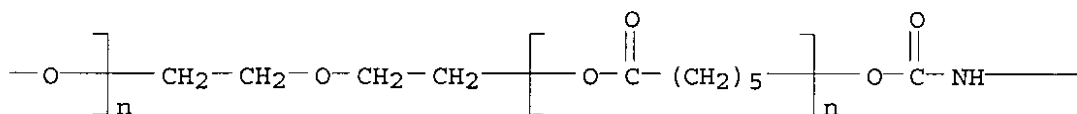
RN 77046-19-6 CAPLUS

CN Poly[oxy(1-oxo-1,6-hexanediyl)],  $\alpha, \alpha'$ -(oxydi-2,1-  
 ethanediyl)bis[ $\omega$ -[[[[[1,3,3-trimethyl-5-[[2-[2-(2-methyl-1-oxo-2-  
 propenyl)oxy]ethoxy]carbonyl]amino]cyclohexyl]methyl]amino]carbonyl]oxy] -  
 (9CI) (CA INDEX NAME)

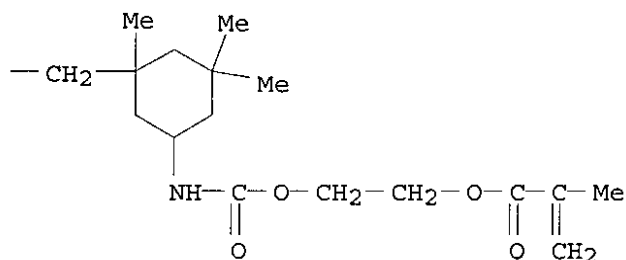
PAGE 1-A



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PAGE 1-C



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IC      G02B005-14; C09J005-00
CC      37-3 (Plastics Fabrication and Uses)
        Section cross-reference(s): 73, 76
ST      acrylic polyurethane adhesive optical material; fiber optic adhesive
        acrylic polyurethane; electroluminescent device adhesive acrylic
        polyurethane
IT      Electroluminescent devices
        Fiber optics
        Optical materials
            (adhesives for, photocurable, polyurethane acrylates as)
IT      Urethane polymers, uses and miscellaneous
        RL: TEM (Technical or engineered material use); USES (Uses)
            (acrylic, adhesives, photocurable, for optical materials)
IT      Adhesives
            (photocurable, polyurethane acrylates, for optical materials)
IT      77035-67-7 77046-18-5 77046-19-6    77093-03-9
        RL: TEM (Technical or engineered material use); USES (Uses)
            (adhesives, photocurable, for optical materials)

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L73 ANSWER 6 OF 6 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1976:434719 CAPLUS  
 DOCUMENT NUMBER: 85:34719  
 TITLE: Ultraviolet curing process employing flash photolysis  
 INVENTOR(S): De Sorgia, Miksa; McGinniss, Vincent D.  
 PATENT ASSIGNEE(S): SCM Corp., USA  
 SOURCE: U.S., 6 pp. Division of U.S. 3,875,067.  
 CODEN: USXXAM  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3943046	A	19760309	US 1974-515511	19741017
US 3875067	A	19750401	US 1973-373374	19730625

PRIORITY APPLN. INFO.: US 1973-373374 19730625

AB A paint film was cured in an air-inhibiting atmospheric by exposure to a pulsed photolysis lamp **emitting** flashing uv **light** to cure the paint film, and exposure to a sustained photolysis **light emitting** substantially continuous uv **light** to completely photopolymerize the paint film other than the film surface. Thus, a paint prepared from the reaction product of 1 mole isophorone diisocyanate with 2 moles hydroxyethyl acrylate 40, hydroxyethyl acrylate 25, 2-phenoxyethyl acrylate 15, melamine acrylate 15, benzophenone 2 and methyldiethanolamine 1 part was applied at 1  $\mu$  wet thickness to an aluminum panel then exposed to an uv flash photolysis lamp in atmospheric air at room temperature

A superficial top surface cure resulted. The panel was then exposed to continuous uv lamps to give a fully cured paint film with excellent adhesion and gloss. Coatings irradiated with the continuous uv lamps alone yielded films having tacky surfaces.

IT 59808-96-7

RL: TEM (Technical or engineered material use); USES (Uses)  
 (coatings, uv curing of, flashing photolysis in)

RN 59808-96-7 CAPLUS

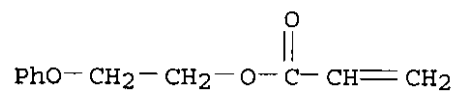
CN 2-Propenoic acid, 2-hydroxyethyl ester, polymer with 2-phenoxyethyl 2-propenoate, 1,3,5-triazine-2,4,6-triamine mono-2-propenoate and 2-[[[[[1,3,3-trimethyl-5-[[[2-[(1-oxo-2-propenyl)oxy]ethoxy]carbonyl]amino]cyclohexyl]methyl]amino]carbonyl]oxy]ethyl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 48145-04-6

CMF C11 H12 O3

*no curai*

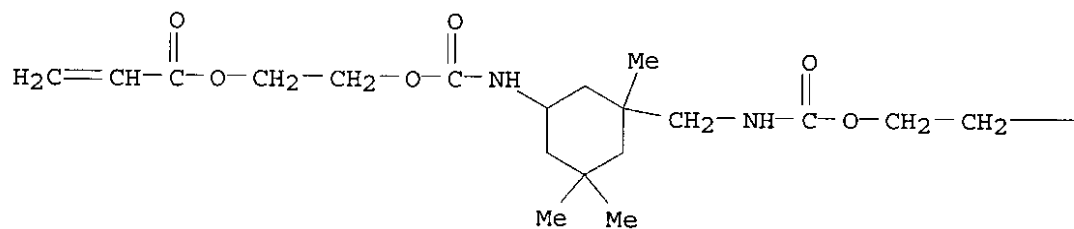


CM 2

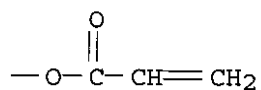
CRN 42404-50-2

CMF C22 H34 N2 O8

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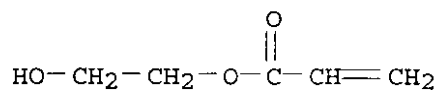
PAGE 1-B



CM 3

CRN 818-61-1

CMF C5 H8 O3



CM 4

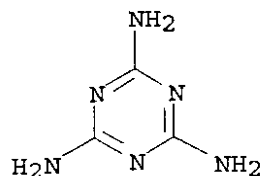
CRN 59808-95-6

CMF C3 H6 N6 . C3 H4 O2

CM 5

CRN 108-78-1

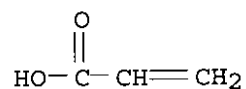
CMF C3 H6 N6



CM 6

CRN 79-10-7

CMF C3 H4 O2



IC C08F  
NCL 204159230  
CC 42-2 (Coatings, Inks, and Related Products)  
Section cross-reference(s): 74  
ST UV curing paint; flash photolysis paint curing  
IT Photolysis  
(flash, of coatings, in uv curing process)  
IT Crosslinking  
Polymerization  
(photochem., of coatings, flash photolysis in)  
IT Coating process  
(uv curing in, with flash photolysis)  
IT 59808-96-7  
RL: TEM (Technical or engineered material use); USES (Uses)  
(coatings, uv curing of, flashing photolysis in)

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